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PATENT ABSTRACTS OF JAPAN

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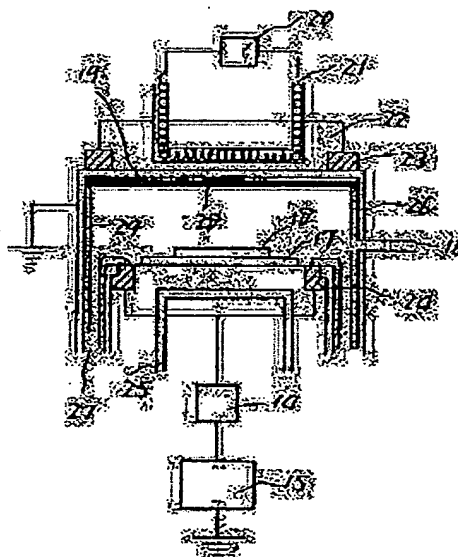
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(54) PLASMA ETCHING DEVICE

(57)Abstract:

PURPOSE: To reduce the production of dust to the extreme degree, by heating the surface of an anode to 50°C or more by using a heater, when the parallel-flat type electrode loaded with the anode and the material to be etched and constituted of the cathode whereon a high frequency power is impressed is contained into a pressure reduction vessel, and halogen compound gas is introduced resulting in the etching of the material to be etched.

CONSTITUTION: The parallel-flat type electrode constituted of a pair of electrode opposed each other, i.e. the cathode 17 and the anode 19 is arranged in the pressure reduction vessel 26, the material to be etched 18 is loaded on the electrode 17, a carbon plate 28 is adhered on the lower surface of the electrode 19. Next, the mixed gas with CF₄ and H₂ is introduced into the pressure reduction vessel 26, and the high frequency power from the power source 15 is impressed on the cathode 17 via a matching circuit 14 resulting in the generation of plasma between the cathode 17 and the anode 19, and accordingly the material to be etched 18 is etched. In this constitution, the heater 22 with a built-in hot wire 21 is contacted on the back surface of the anode 19, and the anode 19 kept heated to 50°C or more by passing the current from a current source 20. Thus, the dispersion of polymers from the carbon plate 28 is not generated.



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